

**AC II FIXED RATE STATEMENT OF WORK FOR
REMEDIAL INVESTIGATION (RI)**

**GRIGGS AND WALNUT GROUND WATER PLUME SUPERFUND SITE
LAS CRUCES, DOÑA ANA COUNTY, NEW MEXICO**

APRIL 25, 2017

TABLE OF CONTENTS

INTRODUCTION.....	3
PURPOSE	3
SITE DESCRIPTION	3
GENERAL REQUIREMENTS	4
RECORD KEEPING REQUIREMENTS	5
EPA PRIMARY CONTACT	5
TASK ORDER COMPLETION DATE AND PROJECT CLOSEOUT	5
TASK 1 – PROJECT PLANNING AND SUPPORT	5
Subtask 1.1 – Project Planning	5
Subtask 1.2 – Site-Specific Plans	5
Subtask 1.3 – Pollution Liability Insurance	6
Subtask 1.4 – Project Management	6
Subtask 1.5 – Project Initiation	6
TASK 2 – COMMUNITY INVOLVEMENT	7
TASK 3 – FIELD INVESTIGATION/DATA ACQUISITION	7
Subtask 3.1 – Mobilization/Demobilization	7
Subtask 3.2 – Hydrogeological Assessment	7
Subtask 3.3 – Soil Boring, Drillings and Testing	7
Subtask 3.4 – Environmental Sampling	7
Subtask 3.5 – Reuse Assessment	8
Subtask 3.6 – Geotechnical Survey	8
Subtask 3.7 – Investigative-Derived Waste Characterization and Disposal	9
Subtask 3.8 – Site Reconnaissance	9
Subtask 3.9 – Property Records Search for Site Access	9
Subtask 3.10 – Ecological Characterization	9
TASK 4 – SAMPLE ANALYSIS	9
TASK 5 – ANALYTICAL SUPPORT AND DATA VALIDATION	10
Subtask 5.1 – Prepare and Ship Samples	10
Subtask 5.2 – Develop Performance Criteria	10
Subtask 5.3 – Oversight of Analytical Services	10
Subtask 5.4 – Coordinate with EPA Laboratory	10
Subtask 5.5 – Implement QA Program	10
Subtask 5.6 – Provide Sample Management	10
Subtask 5.7 – Perform Data Validation	10
Subtask 5.8 – Data Usability Review	10
Subtask 5.9 – Data Validation Reports	10
TASK 6 – DATA EVALUATION	10
Task 6.1 – Compilation and Formatting of Analytical and Field Data	10
Task 6.2 – Environmental Fate and Transport Modeling/Evaluation	11
TASK 7 – RISK ASSESSMENT	11

Subtask 7.1 – Conduct Baseline Human Health Risk Assessment	11
Subtask 7.2 – Conduct Baseline Ecological Risk Assessment	11
Subtask 7.3 – Prepare Draft Risk Assessment Reports	11
Subtask 7.4 – Prepare Final Risk Assessment Reports	11
TASK 8 – TREATABILITY STUDY/PILOT TESTING	12
TASK 9 – REMEDIAL INVESTIGATION REPORT	12
Subtask 9.1 – Prepare Draft Remedial Investigation Report	12
Subtask 9.2 – Prepare Final Remedial Investigation Report	12
TASK 10 – REMEDIAL ALTERNATIVES SCREENING	12
TASK 11 – REMEDIAL ALTERNATIVES EVALUATION	12
TASK 12 – FEASIBILITY STUDY REPORT	12
TASK 13 – POST RI/FS SUPPORT	12
Subtask 13.1 – Attend Public and Technical Meetings	12
Subtask 13.2 – Prepare Presentation Materials	12
Subtask 13.3 – Provide Technical Assistance on Responsiveness Summary	12
Subtask 13.4 – Provide Technical Assistance on Proposed Plan and ROD	12
TASK 14 – ADMINISTRATIVE RECORD	12
TASK 15 – TASK ORDER CLOSEOUT	12
Subtask 15.1 – Archive Files	13
Subtask 15.2 – Prepare Task Order Closeout Report	13
ATTACHMENT 1 – SUMMARY OF MAJOR SUBMITTALS FOR RI AT GRIGGS AND WALNUT GROUND WATER PLUME SUPERFUND SITE	
ATTACHMENT 2 – WORK BREAKDOWN STRUCTURE (WBS) FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY (RI/FS)	
ATTACHMENT 3 – REGULATIONS AND GUIDANCE DOCUMENTS	
ATTACHMENT 4 – TRANSMITTAL OF DOCUMENTS FOR ACCEPTANCE BY EPA	
ATTACHMENT 5 – TRANSMITTAL REGISTER	

**RAC II FIXED-RATE STATEMENT OF WORK
FOR
REMEDIAL INVESTIGATION (RI)
GRIGGS AND WALNUT GROUND WATER PLUME SUPERFUND SITE,
LAS CRUCES, DOÑA ANA COUNTY, NEW MEXICO**

CONTRACT NO: EP-W-06-004_____
TASK ORDER NO: _____

INTRODUCTION

In September of 2016 the U.S. Environmental Protection Agency, Region 6 (EPA) completed the first Five-Year Review (FYR) of the Griggs and Walnut Ground Water Plume Superfund site (Site), located in the City of Las Cruces, Doña Ana County, New Mexico, under the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA). In the FYR report, EPA deferred the protectiveness statement on the cleanup until a potential vapor intrusion pathway at residential structures was investigated to determine if it posed a health threat to residents.

This RAC II Fixed-Rate Statement of Work (SOW) sets forth the work to be completed under Contract Number EP-W-06-004, Task Order _____, to support EPA's effort to complete its determination on the protectiveness of the remedy and any future response actions necessary to mitigate indoor air vapor intrusion.

PURPOSE

The purpose of the task order is to conduct a remedial investigation (RI) to determine if indoor air vapor intrusion is a completed exposure pathway in a residential area located at the intersection of North Walnut Street and East Hadley Avenue. A soil gas survey performed in this community in 2005, as part of the original RI/FS, showed trace levels of Site contaminants of concern (COCs). The source of the COCs is believed to be nearby vadose zone soil contamination, which was identified as a primary release area for the ground water contamination. The purpose of the RI is also to determine if hazardous chemical vapors in soil gas at the primary release area presents a potential risk for future residential land use.

Specifically, the RI involves a two-phase process. The initial phase (Phase 1) will be to sample exterior soil gas and other outdoor soil gas at the residential area and the primary release area located near the intersection of North Walnut Street and East Hadley Avenue. It will also include the performance of a screening level human health risk assessment utilizing EPA's risk-based vapor intrusion screening levels (VISLs) and the VISL Calculator Users Guide to assess the potential for indoor air vapor intrusion. The second phase (Phase 2) will be to sample sub-slab soil gas and indoor air depending on the findings of Phase 1.

This work will also include (1) a review of Site-related documents, (2) the design of a sampling and analysis plan and other Site-specific documents, (3) the collection and analysis of outdoor and sub-slab soil gas and indoor air data, (4) the performance of a second screening level human health risk assessment, and (5) the preparation of a RI report, including the Phase 1 and 2 screening level human health risk assessments. This SOW sets forth the framework and requirements for this effort.

One goal of the RI is to develop the minimal amount of data necessary to determine if there are vapors in homes at unsafe levels to support an early response action under EPA's Removal Program. Another goal is to allow EPA to complete an addendum to the 2016 Five-Year Review Report, which deferred the determination on remedy protectiveness until the indoor air vapor intrusion pathway was investigated. The estimated completion date for this task order is *July 30, 2018*.

SITE DESCRIPTION

The Site is located in the City of Las Cruces, Doña Ana County, New Mexico. The Site is a ground water plume

contaminated with dissolved tetrachloroethene (also known as perchloroethylene or “PCE”), the primary COC at the Site. The geographical extent of the plume in the ground water is approximately 1.8 miles long by 0.5 miles wide, and is located generally between East Griggs Avenue and East Hadley Avenue, and extends east to beyond Interstate 25 (I-25), and west to beyond North Solano Avenue. The depth to ground water contamination is approximately 190 feet below ground surface.

Based on the soil vapor survey results conducted during the RI, elevated concentrations of PCE (up to 1,186 parts per billion volume) were found in the unsaturated zone between 15 and 184 feet below ground surface. The highest concentrations of PCE in soil occur beneath, and in the vicinity of, three identified source areas: the former location of the Crawford Municipal Airport, at the present location of the Doña Ana County Transportation Department (DACTD) maintenance facility, and near the former location of a National Guard Armory. Concentrations of PCE in more than half of the soil vapor samples collected from the shallow subsurface in the residential area northeast of the intersection of East Hadley Avenue and North Walnut Street in 2005 exceeded screening criteria for PCE through the vapor intrusion pathway.

Current land use at and near the Site is characterized by a broad mix of commercial, public recreational, light industrial, and residential land uses. EPA placed the site on the NPL in 2001. A Record of Decision for ground water was issued in 2007.

GENERAL REQUIREMENTS

This is a fixed rate task order that requires the contractor to complete a RI to support EPA response actions under the Removal Program to mitigate indoor air vapors and protect human health and the environment. The contractor shall furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing and completing the RI in accordance with the requirements of this SOW.

This SOW and accompanying work breakdown structure (WBS) (Attachment 2) is provided as a format for the contractor to structure its proposed approach and cost estimate. Please use the WBS in cost estimate preparation and technical and cost tracking and reporting under this task order.

In conducting the fixed rate task order, EPA expects the contractor to propose and implement the most appropriate and cost-effective procedures and methodologies using accepted engineering practices and controls. Throughout the performance of this task order, EPA expects the contractor to be responsible for performing services and providing products at the lowest reasonable cost. If the contractor fails to meet the requirements within the negotiated costs, the government may elect to provide the contractor with additional funds to complete the task order without providing any additional fee. If there are changes to the SOW by the government, the government will issue a formal amendment to the SOW and negotiate the cost of the amendment with the contractor to form a new cost estimate.

A summary of the potential major deliverables and proposed schedule for submittals is in Attachment 1. This summary and schedule can be used as the basis for the contractor’s proposed deliverables and schedules included in the work plan. Submit the major deliverables using the Transmittal of Documents for Acceptance by EPA Form. (Attachment 4). The EPA Task Order Manager (TOM) will track deliverables submitted by the contractor using the Transmittal Register (Attachment 5). Additionally, submit copies of major deliverables to the New Mexico Environment Department’s Project Manager as noted in Attachment 1 at the same time they are submitted to the EPA TOM.

A list of primary guidance and reference material is provided in Attachment 3. In all cases, the contractor shall use the most recently issued guidance.

Communicate at least weekly with the EPA TOM, either in face-to-face meetings or through conference calls. Document all decisions that are made in meetings and conversations with EPA. Forward this documentation to the TOM within five working days of the meeting or conversation.

EPA provides oversight of contractor activities throughout the RI. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA’s responsibility to provide effective protection of public health, welfare, and the environment. EPA also reviews deliverables to assess the likelihood that the RI achieves its goals

and that its performance and operations requirements have been met. Acceptance of deliverables by EPA does not relieve the RI contractor from responsibility for the adequacy of the deliverables or its professional responsibilities.

For purposes of background checks, this Site is designated at Level 2.

RECORD KEEPING REQUIREMENTS

Maintain all technical and financial records for the RI/FS in accordance with the contract. At the completion of the task order, submit an official record of the RI in both compact disk and a hardcopy to the TOM. Provide the deliverables using electronic media.

EPA PRIMARY CONTACT

The primary contact for this task order is the EPA TOM, Mark Purcell. He can be reached at (214) 665-6707, via facsimile at (214) 665-6660, or via e-mail at Purcell.mark@epa.gov. His mailing address is US EPA Region 6, Superfund Division (6SF-RL), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202.

TASK ORDER COMPLETION DATE AND PROJECT CLOSEOUT

At the completion of the task order, perform all necessary project closeout activities as specified in the contract. These activities include closing out any subcontracts, indexing and consolidating project records and files as required above, and providing a technical and financial closeout report to EPA. The goal is to complete all technical activities and closeout activities for this task order by **June 30, 2018**.

TASK 1 – PROJECT PLANNING AND SUPPORT

WBS: 1

This work element involves planning for the execution and overall management of this task order. The technical and managerial activities required to implement the RI and the associated costs shall be developed during the planning phase and detailed in the RI work plan and cost estimate.

Subtask 1.1 – Project Planning

WBS: 1.1

Prepare and submit a RI work plan for vapor intrusion that includes a detailed description of implementation activities, performance monitoring, and overall management strategy, including optimization, for the RI. Typical activities involved in preparing the work plan include, but are not limited to, the following:

- *Attend Scoping Meeting.* Contact the TOM within five calendar days after receipt of the task order to schedule the scoping meeting to be held at the U.S. EPA Region 6 office in Dallas, Texas.
- *Develop Work Plan and Cost Estimate.* The work plan shall include a detailed description of the technical approach for the RI activities in accordance with the SOW. Specify the necessary procedures, inspections, deliverables, and schedules. Include a comprehensive implementation management schedule for completion of each major activity and submittal. Prepare the estimated cost to complete the task order, including subcontractor costs, for each element of the SOW; and, provide a breakdown of the cost by task and subtask levels, in accordance with the contract WBS.
- *Negotiate Work Plan and Cost Estimate.* Negotiate and prepare a revised work plan if the contractor fails to meet the Region's minimum standards. Note that EPA does not anticipate a need to re-negotiate with the contractor nor to require the contractor to revise the work plan. Contractor costs associated with the preparation of the revised work plan and cost estimate shall be paid by the government but shall not bear fee.

Subtask 1.2 – Site-Specific Plans

WBS: 1.2

Prepare and maintain site-specific plans as necessary for RI implementation and conduct a Site reconnaissance to aid in preparation of the plans. Incorporate the plans and procedures received from any subcontractor(s) into the overall site plans. Should the contractor fail to meet the required standards in accordance with the appropriate legal, regulatory, and EPA guidance, prepare revised site-specific plans. (NOTE: In that event, contractor costs

associated with the preparation of the revised site-specific plans shall be paid by EPA but shall not bear fee.) The Site reconnaissance visit and the site-specific plans to be prepared are as follows:

- *Conduct Site Reconnaissance.* Conduct a site reconnaissance visit with the EPA TOM and the New Mexico Environment Department Project Manager during the RI planning phase to assist in developing an understanding of the Site and any logistics. The objectives of the reconnaissance shall be to:
 - Observe site conditions and characteristics such as the size and condition of the homes, potential access issues for Geoprobe or other field equipment;
 - Conduct outdoor survey for potential vapor sources related to the Site and un-related to the Site (e.g., commercial and industrial buildings, parking lots, and mobile sources such as cars, trucks, and equipment);
 - Estimate the potential number and location of exterior soil gas samples and other outdoor soil gas samples by walking the site, utilizing the conceptual Site model, reviewing the appropriate land plats and other site maps (e.g., Google Earth), and observing the location of the residential structures; and
 - Estimate the potential number of sub-slab soil gas and indoor air sampling locations for residential structures for planning Phase 2.
- Sampling and Analysis Plan (SAP) in accordance with 40 CFR 300.430(b)(8)(i);
- Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) as part of the SAP and in accordance with 40 CFR 300.430(b)(8)(ii); and
- Site-specific Health and Safety Plan (HSP) that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120(l)(1) and (l)(2).

The HSP must be completed and reviewed by EPA prior to the Site reconnaissance visit. In preparing the SAP (including the FSP and QAPP), evaluate and develop an analyte list which is limited to the vapor-forming chemicals known or suspected to be present at the Site. The laboratory analytical methods to be selected must be capable of obtaining reliable analytical detection of concentrations less than the project-appropriate risk-based VISLs established by EPA.

Subtask 1.3 – Pollution Liability Insurance **[INACTIVE]**

WBS 1.3

Subtask 1.4 – Project Management

WBS: 1.4

Perform activities required to effectively manage the task order. These activities typically include, but are not limited to, the following:

- Monitoring costs and progress;
- Preparing and submitting monthly progress reports that document monthly and cumulative cost, performance status, and technical progress;
- Preparing and submitting monthly invoices in accordance with the level of detail as specified in the contract;
- Manage, track, and report status of site-specific equipment;
- Participating in meetings; and
- Accommodating any external audit or review mechanism that EPA requires.

Subtask 1.5 – Project Initiation

WBS: 1.5

Perform project initiation that will lead to the completion of the RI and support of any EPA removal response

actions, if necessary, to eliminate or reduce indoor air vapors in residences to protect human health. Typical activities include, but are not limited to, the following:

- Develop a conceptual understanding of the Site based on the review and evaluation of the 2016 EPA Second Five-Year Review and other site-related documents to support preparation of site-specific plans;
- Develop/review qualifications of laboratories for the given analytical requirements; and
- Procure, manage, and provide oversight of pool and team subcontracts for analytical services, land title surveys, and geoprobe or other auguring activities.

A review of Site documents shall aid in determining the appropriate depths for collecting soil gas samples as part of the preparation of the SAP and QAPP.

TASK 2 – COMMUNITY INVOLVEMENT (CR) [INACTIVE]

WBS: 2

TASK 3 – FIELD INVESTIGATION/DATA ACQUISITION

WBS: 3

Field Investigation and data acquisition begin with EPA's approval of the Site-specific SAP, including the FSP and QAPP. The subtasks defined below are included as part of Task 3.

Subtask 3.1 – Mobilization/Demobilization

Mobilization shall include collection and checking all necessary field equipment and supplies, preparation of field vehicles, travel to the Site, setup of the sampling sites and field preparation. It shall also include coordination with the EPA TOM and all subcontractors.

Demobilization shall include breakdown of all sampling stations, packing of all equipment and remaining supplies and containers, cleaning up sampling sites, managing investigative derived waste, and traveling from site to Contractor's office.

For planning purposes, assume that there will be three separate mobilizations and demobilizations for sampling. The first shall be for the Phase 1 exterior and other outdoor soil gas sampling. The other two shall be for the Phase 2 sub-slab soil gas and indoor air sampling. There shall be two separate Phase 2 sampling events for two different seasons of the year (i.e., cooler and warmer season).

Subtask 3.2 – Hydrogeological Assessment [INACTIVE]

Subtask 3.3 – Soil Boring, Drilling and Testing [INACTIVE]

Subtask 3.4 – Environmental Sampling

This task consists of a two-phased sampling program for investigating the indoor air vapor intrusion pathway for residential structures. Phase 1 shall consist of exterior and other outdoor soil gas sampling. Phase 2 shall consist of sub-slab soil gas and indoor air sampling, along with outdoor ambient air sampling for background.

Phase 1 – Exterior and Other Outdoor Soil Gas Sampling

The Phase 1 exterior and other outdoor soil gas sampling shall be conducted in accordance with the EPA-approved SAP and QAPP, the 2015 EPA vapor intrusion guidance (OSWER Publication 9200.2-154), and all other appropriate EPA guidance. Exterior soil gas samples and other outdoor soil gas samples shall be collected at multiple locations and various depths of no less than five (5) feet below ground surface. The sampling locations shall be as follows:

- Exterior (close proximity) to homes;
- Along road right-of-way in areas where access to private property is denied;
- Deeper “near source” soil gas samples in the vadose zone, and

- Other outdoor soil gas sampling locations at various depths in the Primary Release Area.

Soil gas samples shall be collected by installing a probe into the ground to the predetermined depth and drawing the gas out of the probe for collection and transport to a laboratory for analysis. To ensure the soil gas samples represent conditions *in situ* (not adversely impacted by artificial infiltration of ambient air), a reliable seal of the annulus between the probe and the probe housing must be attained and the seal leak tested. Purging of the probe shall also be conducted before each soil gas sample is collected. Once the sampler has been installed, a period of time not less than two hours shall be allowed for the subsurface to return to equilibrium conditions before removing the sampler. Field conditions such as wind direction, temperature, precipitation information and other site-specific information shall also be documented at the time of sampling.

For some residential structures, the vapor source may be directly beneath the building. In such cases, it is likely the soil gas concentration will be greater beneath the building than at the same depth in adjacent open areas. Hence, exterior soil gas samples may not be as accurate an estimate of sub-slab or indoor air concentrations than the deeper soil gas samples immediately above the ground water plume.

Phase 2 – Sub-Slab Soil Gas and Indoor Air Sampling of Residential Structures

The Phase 2 sub-slab soil gas and indoor air sampling shall be conducted in accordance with the EPA-approved SAP and QAPP, the 2015 EPA vapor intrusion guidance (OSWER Publication 9200.2-154), and all other appropriate EPA guidance. Two rounds of sub-slab sampling shall be performed to understand temporal variability associated with seasonal variations in climate and habits of home occupants.

Sub-slab soil gas samples shall be collected by drawing soil gas from the air space immediately below the floor slab of the residence. Access to this air space may be obtained by drilling or coring vertically through the concrete within the home and inserting a probe which is sealed into the floor. Access may also be obtained by drilling beneath the concrete from the outside of the home. It may be appropriate to have the sub-slab samples centrally located beneath the footprint of some homes if the ground water plume source is laterally extensive relative to the building footprint. Leak testing shall be performed to insure the hole is properly sealed as soil gas probes can disturb subsurface conditions.

Prior to drilling, the location of cables in post-tension concrete slabs shall be identified to avoid drilling through the cables. Additionally, all underground utilities and structures (e.g., electrical, gas, water, and sewer) shall be located and marked prior to drilling to avoid damage to these lines. The pressure difference between the indoors and subsurface shall be measured during collection of sub-slab soil gas samples using a portable pressure monitor installed in a dedicated sub-slab probe. The differential pressure data shall be collected continuously starting approximately 24 hours before sampling and throughout the sample collection period. Pressure measurements shall be taken at locations away from where sub-slab sampling probes are installed. After the sampling probe has been installed, a period of time not less than two hours shall be allowed for the subsurface to return to equilibrium conditions before collecting the sample. During collection of sub-slab soil gas samples, relevant meteorological data shall be recorded using direct observation or readily available weather data sources.

Indoor air samples shall be collected contemporaneously with the sub-slab soil gas samples using similar sampling and analysis methods and sampling durations to allow for data comparisons. Potential indoor sources of vapor-forming chemicals shall be removed at least 24 hours prior to the start of indoor sampling. One time-integrated sample shall be collected in an area directly above the foundation floor (crawl space or basement) and one from the first floor living or occupied area. The sample for the living or occupied area shall be collected from the breathing zone of the most sensitive exposed occupants. Indoor air samples will be collected over a 24-hour period.

Outdoor (ambient) air samples shall be collected contemporaneously with the sub-slab soil gas and indoor air samples using similar sampling and analysis methods. Ambient air sampling shall begin at least one hour, but preferably two hours, before indoor air sampling begins and continue until at least 30 minutes before indoor air monitoring is complete. The location of the ambient air samples shall be away from any known or suspected chemical releases, including releases from field equipment.

Subtask 3.5 – Reuse Assessment [INACTIVE]

Subtask 3.6 – Geotechnical Survey [INACTIVE]

Subtask 3.7 – Investigative-Derived Waste Characterization and Disposal

Characterize and dispose of field-generated waste in accordance with local, state and federal regulations.

Subtask 3.8 – Site Reconnaissance

Two Site reconnaissance visits shall be conducted. The first reconnaissance shall be prior to, or at the start of, the Phase 1 investigation to walk the two sampling areas (residential street and Primary Release Area) and stake out the exterior and other outdoor soil gas sampling locations and mark underground utilities. If some sampling locations need to be in the road right of way¹, the walk through will need to be with a land surveyor. The second reconnaissance shall be to survey residential structures prior to the start of the Phase 2 sub-slab soil gas and indoor air sampling.

The objectives of the Phase 1 reconnaissance are to:

- Walk the two sampling areas (residential area and primary release area);
- Identify and mark all underground utilities with surveyor;
- Identify and stake out appropriate exterior soil gas sampling locations immediately adjacent to residential structures where EPA has obtained access agreements;
- Identify and stake out “near source” sampling locations at the Primary Release Area; and
- Identify and stake out any other outdoor soil gas sampling locations, including along right-of-ways, if needed to complete soil gas survey.

The objectives of the Phase 2 reconnaissance are to:

- Collect complimentary data by direct indoor observation and interviews with residents to support sub-slab and indoor sampling, such as hours of home occupancy, characteristics of residents (e.g., number of adults, children, sensitive populations);
- Identify potential indoor background sources (e.g., household cleaning products) using vapor detecting field instruments and visual observation;
- Identify appropriate sub-slab and indoor sampling locations based on a walkthrough of homes and interview of residents;
- Identify optimal outdoor (ambient) air sampling locations to be conducted contemporaneously with sub-slab and indoor sampling and record observable potential outdoor sources of pollutants; and
- Collect grab samples of indoor air, if necessary, to characterize background sources and composition of identified indoor sources of chemical vapors.

Subtask 3.9 – Property Records Search for Site Access **[INACTIVE]**

Subtask 3.10 – Ecological Characterization. **[INACTIVE]**

TASK 4 – SAMPLE ANALYSIS (SN)

WBS: 4

Perform analyses of samples collected under Task 3 and produce analytical data. A variety of mechanisms may be used to implement this task for soil gas, indoor air, and ambient air samples, including the Contract Laboratory Program (CLP), laboratories procured under sub pool or team subcontracts, or the EPA Regional Laboratory in Houston, Texas. [For cost estimating purposes, there should be no direct labor costs under this task - no hours should be reflected under this task, only dollars.]

1. EPA will attempt to obtain access agreements from residents. If access is denied at one or more of the homes currently of interest, it may be necessary to use the road right of way to complete the Phase 1 soil gas survey.

TASK 5 – ANALYTICAL SUPPORT AND DATA VALIDATION (AN)

WBS: 5

Schedule, coordinate, track, and oversee sample analyses and validate analytical data. Typical activities include, but are not limited to, the subtasks described below.

Subtask 5.1 – Prepare and Ship Samples

Preparing and shipping environmental samples in accordance with the FSP. The following types of sampling shall be required:

- Exterior and other outdoor soil gas sampling;
- Sub-slab soil gas sampling;
- Indoor air sampling; and
- Outdoor (ambient) air sampling.

Subtask 5.2 – Develop Performance Criteria

Developing data quality objectives (DQO) for each sampling event; these DQOs shall be the determinative factor for assessing the success or failure of the sampling.

Subtask 5.3 – Oversight of Analytical Services

Requesting, obtaining, and performing oversight of analytical services in compliance with EPA requirements.

Subtask 5.4 – Coordinate with EPA Laboratory

Coordinating with the EPA Sample Management Office (SMO), the Regional Sample Control Coordinator (RSCC), and/or the Region 6 Houston Laboratory regarding analytical support, data validation, and quality assurance issues.

Subtask 5.5 – Implement QA Program

Implementing the EPA-approved laboratory quality assurance program that provides oversight of in-house and subcontracted laboratories through periodic performance evaluation sample analyses and/or on-site audits of operations and has a system of corrective actions.

Subtask 5.6 – Provide Sample Management

Providing sample management including chain of custody procedures and information management.

Subtask 5.7 – Perform Data Validation

Performing data validation on non-CLP/EPA laboratory data, the process by which the quality of the data, the defensibility of the data, and the chain of custody are verified. Performing data validation in accordance with Regional guidelines.

Subtask 5.8 – Data Usability Review

Reviewing data for usability for its intended purpose.

Subtask 5.9 – Data Validation Reports

Providing reports on data validation and usability from non-CLP/EPA laboratories.

TASK 6 – DATA EVALUATION (DE)

WBS: 6

Task 6.1 – Data Compilation, Formatting and Usability Evaluation

- Compile validated laboratory analytical data and field data for Phase 1 and Phase 2;
- Provide validated laboratory analytical data and field data for Phase 1 and Phase 2 to EPA and the New Mexico Environment Department as electronic deliverables in a format that is compatible with Regional or National electronic data management network. Data shall be used in the preparation of the RI tables, maps and figures. Typical activities for both Phase 1 and Phase 2 data include, but are not limited to, the following:
 - Data usability evaluation and field quality assurance/quality control (QA/QC);
 - Data reduction and tabulation;
 - Field sampling data;
 - Analytical results; and
 - Data trend evaluation;
 - Preparation and evaluation of Site maps showing spatial relationship of data in relationship to source(s) and homes; and
 - Submission of technical memorandum summarizing analytical results.

Task 6.2 – Environmental Fate and Transport Modeling/Evaluation **[INACTIVE]**

TASK 7 – RISK ASSESSMENT (RA)

WBS: 7

Subtask 7.1 – Conduct Baseline Human Health Risk Assessment

Conduct an initial screening level risk assessment for vapor intrusion by comparing concentrations of hazardous vapors in Phase 1 exterior soil gas grab samples to appropriate, risk-based VISLs utilizing the EPA VISL Calculator User's Guide (2014) to extrapolate indoor air vapor concentrations. The VISL comparison shall be performed to obtain preliminary insights about the potential level of exposure and risk posed by vapor intrusion that might be occurring based on exterior soil gas concentrations and appropriate attenuation factors (*see* EPA vapor intrusion guidance). This screening risk assessment shall be the first addendum to the existing human health risk assessment performed as part of the original RI/FS.

If Phase 2 sampling is conducted, conduct a second screening-level risk assessment for vapor intrusion by comparing the Phase 2 time-integrated concentrations of hazardous vapors in sub-slab soil gas samples and indoor air samples, as well as ambient air background samples, to appropriate risk-based vapor intrusion screening levels (VISLs). The VISL comparison shall be performed to assess the potential level of exposure and risk posed by any indoor hazardous vapors. The objective of this assessment is to characterize and quantify, where appropriate, the current and potential human health risks resulting from vapor intrusion that would prevail if no further remedial action is taken. The risk assessment addendums shall be completed in accordance with current EPA guidance, directives and procedures.

Subtask 7.2 – Conduct Baseline Ecological Risk Assessment **[INACTIVE]**

Subtask 7.3 – Prepare Draft Risk Assessment Reports

The results of the Phase 1 screening level risk assessment shall be submitted to EPA in a draft report entitled: "Phase 1 Screening Level Risk Assessment for Indoor Air Vapor Intrusion Pathway, Addendum 1 to Baseline Human Health Risk Assessment."

The results of the Phase 2 screening level risk assessment shall be submitted to EPA in the draft RI Report discussed in Subtask 9.1, below. This screening-level risk assessment shall be the second addendum to the existing baseline HHRA performed as part of the original RI/FS.

Subtask 7.4 – Prepare Final Risk Assessment Reports

Prepare the final report for the Phase 1 screening level risk assessment (Addendum 1). The final Phase 1 report shall

also be incorporated into the RI Report. The final report for the Phase 2 screening level risk assessments (Addendum 2) shall be included as part of the final RI Report described in Subtask 9.2.

TASK 8 – TREATABILITY STUDY/PILOT TESTING (TT) **[INACTIVE]** WBS: 8

TASK 9 – REMEDIAL INVESTIGATION REPORT (RR) WBS: 9

Subtask 9.1 – Prepare Draft Remedial Investigation Report

Document and report findings after all RI data have been evaluated and the Phase 1 initial screening level risk assessment (Addendum 1) and the Phase 2 screening level risk assessment (Addendum 2), if performed, have been completed. The Phase 1 and Phase 2 screening level human health risk assessment addendums shall be incorporated into the Draft RI Report for Vapor Intrusion Pathway. The task includes the preparation of all draft RI report revisions. The draft RI report shall be written in accordance with *Guidance for Conducting Remedial Investigations/Feasibility Studies under CERCLA*, OSWER Directive 9355.3-01, October 1988, Interim Final (or latest revision) and *Guidance for Data Usability in Risk Assessment*, (EPA/540/G-90/008), October 1990 (or latest revision).

Subtask 9.2 – Prepare Final Remedial Investigation Report

Prepare the Final RI Report for Vapor Intrusion Pathway. The final RI report shall be written in accordance with *Guidance for Conducting Remedial Investigations/Feasibility Studies under CERCLA*, OSWER Directive 9355.3-01, October 1988, Interim Final (or latest revision) and *Guidance for Data Usability in Risk Assessment*, (EPA/540/G-90/008), October 1990 (or latest revision).

TASK 10 – REMEDIAL ALTERNATIVES SCREENING (RS) **[INACTIVE]** WBS: 10

TASK 11 – REMEDIAL ALTERNATIVES EVALUATION (RE) **[INACTIVE]** WBS: 11

TASK 12 – FEASIBILITY STUDY REPORT (FS) **[INACTIVE]** WBS: 12

TASK 13 – POST RI/FS SUPPORT (PR) WBS: 13

Subtask 13.1 – Attend Public and Technical Meetings

Attend one technical meeting and two community meetings to support EPA in the presentation of the RI findings. The meetings will be done as part of one trip to New Mexico, with the technical meeting at the NMED offices in Santa Fe, and the community meetings will be on consecutive nights in Espanola and Santa Clara Pueblo.

Subtask 13.2 – Prepare Presentation Materials

Prepare presentation posters as directed by the EPA TOM for the two community meetings. Assume a total of four posters will be prepared. Also support EPA in the preparation of a Power Point slide presentation as directed by the EPA TOM.

Subtask 13.3 – Provide Technical Assistance on Responsiveness Summary **[INACTIVE]**

Subtask 13.4 – Provide Technical Assistance on Proposed Plan and ROD **[INACTIVE]**

TASK 14 – ADMINISTRATIVE RECORD (AR) **[INACTIVE]** WBS: 14

TASK 15 – TASK ORDER CLOSEOUT (CO) WBS: 15

Subtask 15.1 – Archive Files

Perform the necessary activities to close out the task order in accordance with contract requirements. Typical activities include but are not limited to, the packaging and return of documents to the government. Archive files in accordance with Federal Record Center requirements and apply an approved data storage technology.

Subtask 15.2 – Prepare Task Order Closeout Report

Prepare the closeout report in accordance with Regional guidance or other procedures as specified in the task order. If the final hours/budget are greater than +/- 10% of the original approved work plan/task order hours/budget, the WACR shall describe the circumstances that explain why this occurred.

**Attachment 1 - Summary of Major Submittals for the RI
Griggs and Walnut Ground Water Plume Site**

TASK	DELIVERABLE	NO. OF COPIES	DUE DATE (calendar days)	ESTIMATED EPA REVIEW PERIOD
1.1	RI Work Plan	3 paper copies and 2 electronic copies (CDs) to EPA.	30 days after receipt of the SOW from EPA	14 days after receipt of work plan
1.2.1	Sampling and Analysis Plan (SAP) (including Field Sampling Plan [FSP] and Quality Assurance Project Plan [QAPP])	2 paper copies and 3 electronic copies to EPA. 2 paper copies and 2 electronic copies to NMED	14 days after completion of Site Reconnaissance Visit under Task 1.1.	10 working days after receipt of deliverable
1.2.2	Health and Safety Plan (HSP)	1 electronic copy to EPA.	Within 14 days after approval of Work Plan	10 working days after receipt of deliverable
1.4	Monthly Progress Reports and Invoices	1 electronic copy to EPA.	Monthly and as required in the contract	NA
5.9	Data Validation Reports for Phase 1 and Phase 2 Data	1 electronic copy to EPA	30 days after receipt of laboratory data from non-CLP/EPA laboratories	NA
6.1	Validated Laboratory Analytical Results and Field Data	1 electronic deliverable to EPA and NMED	15 days after receipt of validated analytical data from laboratory	NA
	Technical Memorandum Summarizing Laboratory Analytical Results (one each for Phase 1 and Phase 2)	2 paper copies and 3 electronic copies to EPA. 2 paper copies and 2 electronic copies to NMED	15 days after receipt of validated analytical data from laboratory	NA
7.0	Phase 1 Screening Level Risk Assessment for Indoor Air Vapor Intrusion Pathway Addendum	2 paper copies and 3 electronic copies of draft and final deliverable to EPA. 2 paper copies and 2 electronic copies of draft and final deliverable to NMED.	15 days after submission of the Phase 1 Technical Memorandum of Laboratory Analytical Results required in Task 6.1 To be included as part of the RI Report (see Task 9 below).	14 working days after receipt of deliverable
	Phase 2 Screening Level Risk Assessment for Indoor Air Vapor Intrusion Pathway Addendum		To be included as part of the RI Report (see Task 9 below).	14 working days after receipt of deliverable
9.1	Draft Remedial Investigation Report	2 paper copies and 3 electronic copies to EPA. 2 paper copies and 2 electronic copies to NMED.	If only Phase 1 RI conducted, 30 days after submission of Phase 1 Screening Level Risk Assessment Addendum 1. If Phase 2 RI conducted, 30 days after submission of the Phase 2 Technical Memorandum of Laboratory	21 working days after receipt of deliverable

			Analytical Results required in Task 6.1	
9.2	Final RI Report	2 paper copies and 3 electronic copies to EPA. 2 paper copies and 2 electronic copies to NMED.	21 days after receipt of EPA comments on the draft RI Report	
13.2	Presentation Materials	1 draft and 1 final deliverable to EPA	3 days after receipt of technical direction from TOM	3 days after receipt of deliverable
15.2	Closeout Report	Electronic deliverable	As Directed in the Task Order Closeout Notification	

Attachment 2 - Work Breakdown Structure (WBS) for Remedial Investigation and Feasibility Study (RI/FS)

Task 1 Project Planning and Support

(PP)

- 1.1 Project planning.
 - 1.1.1 Attend scoping meeting.
 - 1.1.2 Conduct site visit.
 - 1.1.3 Develop Work Plan and cost estimate
 - 1.1.4 Negotiate Work Plan and Cost Estimate.
- 1.2 Prepare, review, and revise the site-specific plans required to implement the RI at the site.
 - 1.2.1 Sampling and Analysis Plan (SAP).
 - 1.2.2 Prepare a site-specific Health and Safety Plan (HSP) that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120(l)(1) and (l)(2). NOTE: The RI HSP may be modified for use if appropriate.
 - 1.2.3 Pilot Test Work Plans **[INACTIVE]**
- 1.3 Pollution Liability Insurance. **[INACTIVE]**
- 1.4 Project management.
 - 1.4.1 Monitor costs and prepare periodic status reports.
 - 1.4.2 Participate in meetings/communicate routinely/prepare meeting notes.
 - 1.4.3 Manage, track, and report status of site-specific equipment.
 - 1.4.4 Accommodate any external audit or review mechanism that EPA shall require.
 - 1.4.5 Evaluate existing data, including usability, when directed by EPA.
 - 1.4.6 Coordinate with local and emergency response teams. **[INACTIVE]**
 - 1.4.7 Review background documents as directed by EPA.
 - 1.4.8 Attend EPA-held training.
- 1.5 Project initiation and support.
 - 1.5.1 Develop a conceptual understanding of the site based on existing data.
 - 1.5.2 Identify likely response scenarios, potentially applicable technologies and operable units that address site problems. **[INACTIVE]**
 - 1.5.3 Prepare conceptual exposure pathway analysis. **[INACTIVE]**
 - 1.5.4 Initiate identification of Applicable or Relevant and Appropriate Requirements (ARARs) that affect remedy selection. **[INACTIVE]**
 - 1.5.5 Develop an EPA-approved laboratory quality assurance program. **[INACTIVE]**
 - 1.5.6 Develop/review qualifications of the laboratory for the given analytical requirements.
 - 1.5.7 Procure, manage, and provide oversight of subcontracts for analytical services.

Task 2 Community Involvement [INACTIVE]

(CR)

- 2.1 Conduct community interviews.
- 2.2 Prepare Community Involvement Plan (CIP).
- 2.3 Provide public meeting and/or open house support.
- 2.4 Prepare fact sheets, notices and other informational documents.
- 2.5 Provide support for proposed plan.
- 2.6 Provide public hearing support.
- 2.7 Publish public notices in local newspapers serving the site community.
- 2.8 Maintain public information repositories.
- 2.9 Develop and update site mailing list.
- 2.10 Provide administrative and technical support for Responsiveness Summary.
- 2.11 Prepare presentation materials.
- 2.12 Implementation of other Community Involvement activities as identified by the site-specific Community Involvement Plan or EPA.
- 2.13 Provide technical support to review Community Involvement deliverables and participate in public meetings.

Task 3 Field Investigation/Data Acquisition

(FI)

- 3.1 Mobilization/demobilization.
- 3.2 Hydrogeological assessment. **[INACTIVE]**

- 3.3 Soil boring, drilling, and testing. [INACTIVE]
- 3.4 Environmental sampling.
- 3.5 Reuse assessment. [INACTIVE]
- 3.6 Geotechnical survey. [INACTIVE]
- 3.7 Field-generated waste characterization and disposal in accordance with local, state and federal regulations.
- 3.8 Site reconnaissance.
- 3.9 Ecological characterization. [INACTIVE]

Task 4 Sample Analysis (SN)

- 4.1 Sample analyses and production of analytical data. [NOTE: For cost estimating purposes there should be no direct labor costs under this task - no hours should be reflected under this task, only dollars.]

Task 5 Analytical Support and Data Validation (AN)

- 5.1 Prepare, and ship environmental samples in accordance with the Field Sampling Plan (FSP).
- 5.2 Develop performance or acceptance criteria (such as data quality objectives (DQO)) for each sampling event; these criteria shall be the determinative factor for assessing the success or failure of the sampling.
- 5.3 Request, obtain, and perform oversight of analytical services in compliance with EPA requirements.
- 5.4 Coordinate with the EPA Sample Management Office (SMO), the Regional Sample Control Coordinator (RSCC), and/or the Environmental Services Division (ESD) regarding analytical support, data validation, and quality assurance issues.
- 5.5 Implement the EPA-approved laboratory quality assurance program that provides oversight of in-house and subcontracted laboratories through periodic performance evaluation sample analyses and/or on-site audits of operations and has a system of corrective actions.
- 5.6 Provide sample management including chain of custody procedures and information management.
- 5.7 Performing data validation on non-CLP/EPA laboratory data, the process by which the quality of the data, the defensibility of the data, and the chain of custody are verified. Perform data validation in accordance with Regional guidelines.
- 5.8 Review data for usability for its intended purpose.
- 5.9 Provide reports on data validation and usability from non-CLP/EPA laboratories.

Task 6 Data Evaluation (DE)

- 6.1 Combine analytical and field data, providing data in a format that is compatible with Regional or national electronic data management network.
 - 6.1.1 Data usability evaluation and field quality assurance/quality control (QA/QC).
 - 6.1.2 Data reduction and tabulation.
 - 6.1.3 Data trend evaluation and submission of Technical Memorandum.
- 6.2 Environmental fate and transport modeling/evaluation. [INACTIVE]
 - 6.2.1 Ground water flow model
 - 6.2.2 Remedial Simulations

Task 7 Risk Assessment (RA)

- 7.1 Conduct a baseline human health risk assessment.
- 7.2 Conduct a baseline ecological risk assessment. [INACTIVE]
- 7.3 Prepare draft risk assessment reports.
- 7.4 Prepare final risk assessment reports.

Task 8 Treatability Study/Pilot Testing [INACTIVE] (TT)

- 8.1 Provide test facility and equipment.
- 8.2 Test and operate equipment.
- 8.3 Retrieve sample for testing.
- 8.4 Prepare Technical Memorandum.
- 8.5 Characterize and dispose of residuals in accordance with Local, State and Federal Regulations.

Task 9 Remedial Investigation Report (RR)

- 9.1 Prepare draft Remedial Investigation report(s).
- 9.2 Prepare final Remedial Investigation report.

- Task 10 Remedial Alternatives Screening [INACTIVE]** (RS)
- 10.1 Establish remedial action objectives.
 - 10.2 Establish general response actions.
 - 10.3 Identify and screen applicable remedial technologies.
 - 10.4 Develop remedial alternatives in accordance with Section 300.430(e) of the NCP (1990).
 - 10.5 Screen remedial alternatives for effectiveness, implementability and cost.
 - 10.6 Prepare Technical Memorandum.
- Task 11 Remedial Alternatives Evaluation [INACTIVE]** (RE)
- 11.1 Assess individual alternatives against each of the evaluation criteria.
 - 11.2 Perform a comparative analysis of all options against the evaluation criteria.
 - 11.3 Prepare a report of findings.
- Task 12 Feasibility Study Report [INACTIVE]** (FS)
- 12.1 Prepare draft Feasibility Study report.
 - 12.2 Prepare final Feasibility Study report.
- Task 13 Post RI/FS Support** (PR)
- 13.1 Attend public meetings, briefings, public hearings, technical meetings with PRPs.
 - 13.2 Prepare presentation materials.
 - 13.3 Provide technical assistance in the preparation of the Responsiveness Summary. [INACTIVE]
 - 13.4 Provide technical assistance in the preparation of the Proposed Plan and ROD. [INACTIVE]
 - 13.5 Prepare Feasibility Study Addendum. [INACTIVE]
- Task 14 Administrative Record [INACTIVE]** (AR)
- 14.1 Attend meeting with EPA TOM, Site Attorney, and Administrative Record Coordinator.
 - 14.2 Provide assistance in compiling documents comprising of the Administrative Record File in accordance with EPA Regional guidance or other procedures as specified.
 - 14.3 Prepare Draft Administrative Record Index in accordance with EPA regional guidance or other procedures as specified.
 - 14.4 Prepare Administrative Record Index.
 - 14.5 Coordinate duplication of Administrative Record.
 - 14.6 Assemble Administrative Record and Index.
- Task 15 Task Order Closeout** (CO)
- 15.1 Archive Files.
 - 15.2 Prepare the Task Order Closeout Report (TOCR).

Attachment 3 - Regulations and Guidance Documents

The following list, although not comprehensive, consists of many of the regulations and guidance documents that apply to the RI/FS process:

1. American National Standards Practices for Respiratory Protection. American National Standards Institute Z88.2-1980, March 11, 1981.
2. ARCS Construction Contract Modification Procedures, September 1989, OERR Directive 9355.5-01/FS.
3. CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
4. Community Relations in Superfund - A Handbook, U.S. EPA, Office of Emergency and Remedial Response, January 1992, OSWER Directive No. 9230.0-3C.
5. A Compendium of Superfund Field Operations Methods, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
6. Construction Quality Assurance for Hazardous Waste Land Disposal Facilities, U.S. EPA, Office of Solid Waste and Emergency Response, October 1986, OSWER Directive No. 9472.003.
7. Contractor Requirements for the Control and Security of RCRA Confidential Business Information, March 1984.
8. Data Quality Objectives for Remedial Response Activities, U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
9. Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA Region IV, Environmental Services Division, April 1, 1986 (revised periodically).
10. EPA NEIC Policies and Procedures Manual, EPA-330/9-78-001-R, May 1978, revised November 1984.
11. Federal Acquisition Regulation, Washington, DC: U.S. Government Printing Office (revised periodically).
12. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3-01.
13. Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potential Responsible Parties, U.S. EPA Office of Emergency and Remedial Response, EPA/540/G-90/001, April 1990.
14. Guidance on Expediting Remedial Design and Remedial Actions, EPA/540/G-90/006, August 1990.
15. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, U.S. EPA Office of Emergency and Remedial Response (DRAFT), OSWER Directive No. 9283.1-2.
16. Guide for Conducting Treatability Studies Under CERCLA, U.S. EPA, Office of Emergency and Remedial Response, Prepublication version.
17. Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
18. Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.
19. Health and Safety Requirements of Employees Employed in Field Activities, U.S. EPA, Office of Emergency and Remedial Response, July 12, 1982, EPA Order No. 1440.2.
20. Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements, U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
21. Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

22. Methods for Evaluating the Attainment of Cleanup Standards: Vol. 1, Soils and Solid Media, February 1989, EPA 23/02-89-042; vol. 2, Ground Water (Jul 1992).
23. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.
24. NIOSH Manual of Analytical Methods, 2nd edition. Volumes I-VII for the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
25. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
26. Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.
27. Procedure for Planning and Implementing Off-Site Response Actions, Federal Register, Volume 50, Number 214, November 1985, pages 45933-45937.
28. Procedures for Completion and Deletion of NPL Sites, U.S. EPA, Office of Emergency and Remedial Response, April 1989, OSWER Directive No. 9320.2-3A.
29. Quality in the Constructed Project: A Guideline for Owners, Designers and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment, American Society of Civil Engineers, May 1988.
30. Remedial Design and Remedial Action Handbook, U.S. EPA, Office of Emergency and Remedial Response, June 1995, OSWER Directive No. 9355.5-22.
31. Revision of Policy Regarding Superfund Project Assignments, OSWER Directive No. 9242.3-08, December 10, 1991. [Guidance, p. 2-2]
32. Scoping the Remedial Design (Fact Sheet), February 1995, OSWER Publ. 9355-5-21 FS.
33. Standard Operating Safety Guides, U.S. EPA, Office of Emergency and Remedial Response, November 1984.
34. Standards for the Construction Industry, Code of Federal Regulations, Title 29, Part 1926, Occupational Health and Safety Administration.
35. Standards for General Industry, Code of Federal Regulations, Title 29, Part 1910, Occupational Health and Safety Administration.
36. Structure and Components of 5-Year Reviews, OSWER Directive No. 9355.7-02, May 23, 1991. [Guidance, p. 3-5]
37. Superfund Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, April 1990, EPA/540/G-90/001.
38. Superfund Remedial Design and Remedial Action Guidance, U.S. EPA, Office of Emergency and Remedial Response, June 1986, OSWER Directive No. 9355.0-4A.
39. Superfund Response Action Contracts (Fact Sheet), May 1993, OSWER Publ. 9242.2-08FS.
40. TLVs-Threshold Limit Values and Biological Exposure Indices for 1987-88, American Conference of Governmental Industrial Hygienists.
41. Treatability Studies Under CERCLA, Final. U.S. EPA, Office of Solid Waste and Emergency Response, EPA/540/R-92/071a, October 1992.
42. USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, U.S. EPA, Office of Emergency and Remedial Response, July 1988.
43. USEPA Contract Laboratory Program Statement of Work for Organic Analysis, U.S. EPA, Office of Emergency and Remedial Response, February 1988.
44. User's Guide to the EPA Contract Laboratory Program, U.S. EPA, Sample Management Office, August 1982.

45. Value Engineering (Fact Sheet), U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9355.5-03FS, May 1990.
 46. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, OSWER Publication 9200.2-154, June 2015
 47. USEPA Vapor Intrusion Screening Level (VISL) Calculator User's Guide, May 2014
-

See the following guidance documents for more information on performance-based contracting:

48. A Guide to Best Practices for Performance-Based Service Contracting, Office of Federal Procurement Policy, April 1996.
49. A Guide to Best Practices for Performance-Based Service Contracting, Final Edition, Office of Federal Procurement Policy, October 1998.
50. Performance-Based Contracting (Fact Sheet), U.S. EPA, Office of Emergency and Remedial Response, Draft February 1999.
51. Policy Letter 91-2, To The Heads of Executive Agencies and Departments, April 9, 1991.

Attachment 4 - Transmittal of Documents For Acceptance By EPA

TRANSMITTAL OF DOCUMENTS FOR ACCEPTANCE BY EPA		DATE:	TRANSMITTAL NO.
TO:		FROM:	G New Transmittal G Re-submittal of Transmittal No. _____
SUBTASK NO.	DELIVERABLE	NO. OF COPIES	REMARKS
ACCEPTANCE ACTION			
DOCUMENTS FOUND ACCEPTABLE (LIST BY SUBTASK NO.)		NAME/TITLE/SIGNATURE OF REVIEWER DATE	

Attachment 5 - Transmittal Register

TRANSMITTAL REGISTER								
PROJECT TITLE AND LOCATION				CONTRACT NO.			TASK ORDER NO.	
Subtask No.	DELIVERABLE	No. of Copies	Due Date	Transmittal No.	Date Received	Date Comments Sent to Contractor	EPA Acceptance Date	REMARKS